



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,111	03/15/2004	Yoshihiro Kobayashi	9319S-000705	9276
27572	7590	07/29/2005		EXAMINER
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303				CHANG, JOSEPH
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/801,111	KOBAYASHI, YOSHIHIRO	
	Examiner Joseph Chang	Art Unit 2817	<i>SW</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 15 March 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date: _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/15/04</u> .	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites the limitation "in the gain adjusting step". There is insufficient antecedent basis for this limitation in the claim.

Claim 23 recites the limitation "each of the gain and phase calculation step". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogiso US Pub. No. 20040140875.

Regarding Claim 1, Ogiso discloses an oscillator circuit (Figure 1) comprising: a plurality of amplifiers(21,22,23), which also function as impedance buffers (intrinsically); a feedback circuit (SAW, 5a), an input side of the feedback circuit being connected to an output terminal of the amplifier (Q2 of 23) an output side of the feedback circuit (D1 and D2 of 5a) being connected to an input terminal of the amplifier (21) a second phase-shift circuit (5a) provided in the feedback circuit, a piezoelectric vibrator (SAW) provided in the feedback circuit, wherein the second phase-shift circuit (5a) and the piezoelectric vibrator (SAW) are connected in series with each other.

However, Ogiso does not disclose a first phase-shift circuit connected between the amplifiers, the first phase-shift circuit being capable of adjusting the phase of an oscillator loop nor the second phase-shift circuit (5a) being capable of adjusting the phase and gain of the oscillator loop.

As would have been well known in the art, an adjustable phase shift circuit would have provided an adjustment for the phase for any oscillation circuit.

Therefore, it would have been obvious to one of ordinary skill in the art to provide a phase adjustment circuit to the oscillator of Ogiso because such a modification would have provided the benefit of adjustment of phase so that the oscillation can be properly generated.

Regarding Claim 2, Figure 1 shows a tank circuit (5a) that inherently resonates at an oscillation frequency of SAW.

Regarding claim 3, 7, having an extra adjustment of VCO would have been obvious based on fine adjustment of oscillation.

Regarding claim 4, 8, 11, 16 Figures 1 shows the amplifiers are differential.

Regarding claim 5, 9, 12, an emitter-coupled logic circuit in the differential amplifier is a typical configuration, and therefore it would have been obvious to one of ordinary skill in the art to recognize that.

Regarding claim 6, 10, 13, 14, 15, 17, 18, 19, Figure 1 shows three SAW resonators.

Regarding claims 20-23, the method limitations in the apparatus claim are considered process steps because they are directed to how the device is made and not a structural limitation. It should be noted that a "product-by-process" claim is directed to the product per se, no matter how such a product was made. It has been well established by the Courts that it is the patentability of the final product per se which must be determined in a "product-by-process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product-by-process" form or not. See *In re Hirao*, 190 USPQ 15 at 17 (footnote 3); *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Marosi et al.*, 218 USPQ 289; and in particular *In re Thorpe*, 227 USPQ 964. It should be noted that the applicant has the burden of proof in such cases, as the above case law makes clear. It is noted that claims 20-13 are apparatus claims because they are dependent from the apparatus claim. 1

Regarding claim 24, a mass measuring apparatus would have been an intended use and, therefore it would have been obvious to one of ordinary skill in the art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Satoh et al. shows phase shift SAW oscillation circuit.

Yarranton et al. discloses a SAW with phase shift oscillation circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Chang whose telephone number is 571 272-1759. The examiner can normally be reached on Mon-Fri 0700-1730.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph Chang
Patent Examiner
Art Unit 2817